

AMENDMENTS TO CLAIMS:

The listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) In an absence of electroplating and non-electric plating, a pattern forming method characterized by forming a mask having pattern-forming openings on a workpiece surface, ~~and then selectively supplying and solidifying~~ an electrically conductive liquid pattern material solution into the pattern-forming openings of the mask, producing a solid solute in the pattern-forming opening by evaporating a solvent from the conductive liquid pattern solution.

2. (Currently Amended) In an absence of electroplating and non-electric plating, A a pattern forming method comprising:

a) a mask forming process for forming a mask having pattern-forming openings on a workpiece surface;

b) a pattern material supplying process for selectively supplying a conductive liquid-pattern material to said pattern-forming openings, and for while also drying said conductive liquid-pattern material in said pattern-forming openings at the same time as said supplying of said conductive liquid pattern material to produce dried solute in said pattern-forming openings through said drying;

c) a process for removing said mask from said workpiece; and

d) an annealing process for annealing said dried solute of the liquid-pattern material.

3. (Currently Amended) In an absence of electroplating and non-electric plating, a A-pattern forming method comprising:

a) a mask forming process for forming a mask having pattern-forming openings on a workpiece surface;

b) a pattern material supplying process for supplying a conductive liquid-pattern material to said pattern-forming openings without submerging said workpiece surface in said liquid-pattern material;

- c) a drying process for evaporating solvent from the liquid-pattern material to produce dried solute;
- d) a mask removal process for removing said mask from said workpiece; and
- e) an annealing process for annealing said dried solute.

4. (Currently Amended) In an absence of electroplating and non-electric plating,
a A-pattern forming method comprising:

- a) a mask forming process for forming a mask having pattern-forming openings on a workpiece surface;
- b) a pattern material supplying process for supplying an electrically conductive, liquid-pattern, ~~material~~ organometallic compound solution to the pattern-forming openings;
- c) a solidifying process for ~~solidifying~~ evaporating a solvent from said liquid-pattern organometallic compound solution ~~material to produce a dried solute supplied into~~ in said pattern-forming openings; and
- d) a mask removal process for removing said mask from said workpiece after sequentially repeating plural times in succession said a) pattern material supply process and c) solidifying process.

5. (Currently Amended) In an absence of electroplating and non-electric plating,
a A-pattern forming method comprising:

- a) a mask forming process for forming a mask having pattern-forming openings on a workpiece surface;
- b) a pattern material supplying process for selectively supplying a liquid-pattern material to the pattern-forming openings without submerging said workpiece surface in said liquid-pattern material;
- c) an adherent-liquid removal process for removing liquid pattern material that adhered to the mask surface when the liquid-pattern material was supplied to the openings;
- d) a drying process for producing dried solute in the pattern-forming openings by evaporating solvent from the liquid-pattern material;

e) an annealing process for annealing said dried solute after sequentially performing plural times said b) pattern material supply process, c) adherent-liquid removal process, and d) drying process; and

f) a mask removal process for removing said mask from the workpiece following process e).

6. (Currently Amended) In an absence of electroplating and non-electric plating,
a A-pattern forming method comprising:

a) a mask forming process for forming a mask having pattern-forming openings on a workpiece surface;

b) a pattern material supplying process for selectively supplying a liquid-pattern material to the pattern-forming openings;

c) a drying process for producing dried solute by evaporating solvents from the liquid-pattern material in the pattern-forming openings; and

d) an annealing process for annealing said dried solute after sequentially performing plural times said b) pattern material supply process and c) drying process.

7. (Currently Amended) In an absence of electroplating and non-electric plating,
a A-pattern forming method comprising:

a) a mask forming process for forming a mask having pattern-forming openings on a workpiece surface;

b) a pattern material supplying process for supplying an electrically conductive liquid-pattern ~~material~~ solution to the pattern-forming openings, wherein elements of said liquid-pattern ~~material~~ solution adhered to said mask surface during the supplying of liquid-pattern ~~material~~ solution to the pattern-forming openings;

c) a solidifying process for ~~solidifying said~~ producing first solid solute from said liquid-pattern ~~material~~ solution supplied into said pattern-forming openings, and ~~solidifying for producing second solid solute from said~~ elements of said liquid-pattern ~~material~~ solution adhered to said mask surface;

d) a solid-material removal process for selectively removing the solidified second solid solute and not removing the first solid solute; ~~elements of the liquid-pattern material that adhered to the mask surface;~~ and

e) a mask removal process for removing said mask from said workpiece after sequentially performing plural times said b) pattern material supply process for supplying said electrically conductive liquid-pattern solution, c) solidifying process, and d) solid-material removal process.

8. (Currently Amended) In an absence of electroplating and non-electric plating, a A-pattern forming method comprising:

a) a mask forming process for forming a mask having pattern-forming openings on a workpiece surface;

b) a pattern material supplying process for supplying a liquid-pattern ~~material~~ solution to said mask openings, wherein pattern-forming material further adheres onto the mask surface during the supplying of liquid-pattern material to the pattern-forming openings;

c) a drying process for producing dried solids by evaporating solvent from the liquid-pattern ~~material~~ solution in said pattern-forming openings and on the mask surface;

d) a solid-material removal process for removing dried solids ~~of produced from~~ the liquid-pattern ~~material~~ solution that adhered on the mask surface when the liquid-pattern ~~material~~ solution was supplied to the pattern-forming openings;

e) an annealing process for annealing the dried solute in said pattern-forming openings after sequentially performing plural times said b) pattern material supply process, c) drying process, and d) solid-material removal process; and

f) a mask removal process for removing said mask from the workpiece after said e) annealing process.

9. (Currently Amended) In an absence of electroplating and non-electric plating, a A-pattern forming method comprising:

a) a mask forming process for forming a mask having pattern-forming openings on a workpiece surface;

b) a pattern material supplying process for supplying a liquid-pattern ~~material~~ solution to said mask openings, wherein pattern-forming ~~material~~ solution further adheres onto the mask surface during the supplying of liquid-pattern material to the pattern-forming openings;

c) a drying process for producing dried solids by evaporating solvent from the liquid-pattern ~~material~~solution in said pattern-forming openings and on the mask surface;

d) a solid-material removal process for removing the dried solids from the mask surface;

e) an annealing process for annealing the dried solids in said pattern-forming opening; and

f) a mask removal process for removing said mask from said workpiece after sequentially performing plural times said b) pattern material supply process, c) drying process, d) solid-material removal process, and e) annealing process, in stated sequence.

10. (Currently Amended) The pattern forming method of claim 1, wherein said mask has hydrophobic properties on at least the surface thereof for repelling said liquid pattern ~~material~~solution.

11. (Currently Amended) The pattern forming method of claim ~~1~~2, wherein said mask is hydrophobic for repelling said liquid pattern material.

12. (Currently Amended) The pattern forming method of claim 1, wherein said solvent is evaporated from said liquid-pattern solution ~~material is solidified through evaporation~~ by applying heat.

13. (Currently Amended) The pattern forming method of claim 12, wherein heating ~~of and solidifying~~ said liquid-pattern ~~material~~solution ~~comprises~~ includes a drying process for producing dried solid solute by evaporating all of said solvent from the liquid pattern ~~material~~solution, and includes a subsequent ~~an~~ annealing process for annealing said dried solute.

14. (Currently Amended) The pattern forming method of claim 1, wherein said mask is removed from said workpiece after ~~solidifying said liquid pattern material~~ producing said solid solute.

15. (Currently Amended) The pattern forming method of claim 1, wherein:

said ~~liquid-pattern material is solidified~~ solid solute is produced after removing liquid-pattern ~~material-solution~~ that adhered to the mask surface when the liquid-pattern ~~material-solution~~ was supplied to the pattern-forming openings.

16. (Previously presented) The pattern forming method of claim 6, wherein said d) annealing process is performed after removing said mask from said workpiece.

17. (Previously presented) The pattern forming method of claim 6, wherein said mask is removed from the workpiece after said d) annealing process.

18. (Previously presented) The pattern forming method of claim 2, wherein said c) process for removing said mask and said d) annealing process are performed simultaneously.

19. (Currently Amended) In an absence of electroplating and non-electric plating, a A-pattern forming method comprising:

a) a mask forming process for forming a mask having pattern-forming openings on a workpiece surface;

b) a pattern material supplying process for supplying a liquid-pattern material to said pattern-forming openings while ~~also-at the same time~~ drying said liquid-pattern material to produce dried solute;

c) an annealing process for annealing said dried solute; and

d) a process for removing said mask from said workpiece after annealing said dried solute.

20. (Currently Amended) In an absence of electroplating and non-electric plating, a A-pattern forming method comprising:

a) a mask forming process for forming a mask having pattern-forming openings on a workpiece surface;

b) a pattern material supplying process for supplying a liquid-pattern ~~material-solution~~ to said pattern-forming openings;

c) a drying process for producing dried solute by evaporating solvent in the liquid-pattern material;

d) an annealing process for annealing said dried solute; and

e) a mask removal process for removing said mask from said workpiece.

21. (Currently Amended) In an absence of electroplating and non-electric plating,
a A-pattern forming method comprising:

a) a mask forming process for forming a mask having pattern-forming openings on a workpiece surface;

b) a pattern material supplying process for supplying a liquid-pattern ~~material~~ solution to said pattern-forming openings, wherein liquid-pattern material adheres to the mask surface during said supplying of liquid-pattern material to said pattern-forming openings;

c) an adherent-liquid removal process for removing liquid-pattern ~~material~~ solution that adhered to the mask surface when the liquid-pattern ~~material~~ solution was supplied to the pattern-forming openings;

d) a drying process for producing dried solute by evaporating solvent ~~in~~ from said liquid-pattern ~~material~~ solution in the pattern-forming openings;

e) a mask removal process for removing said mask from said workpiece after sequentially performing plural times said b) pattern material supply process for supplying said liquid-pattern solution, c) adherent-liquid removal process, and d) drying process in said stated order; and

f) an annealing process for annealing said dried solute after said e) mask removal process.

22. (Currently Amended) In an absence of electroplating and non-electric plating,
a A-pattern forming method comprising:

a) a mask forming process for forming a mask having pattern-forming openings on a workpiece surface;

b) a pattern material supplying process for supplying a liquid-pattern material to said mask openings, wherein liquid-pattern material adheres onto the mask surface during the supplying of liquid-pattern material to the pattern-forming openings;

c) a drying process for producing dried solids in the pattern-forming openings and on the mask surface by evaporating solvent from the liquid-pattern material;

d) a solid-material removal process for selectively removing dried solids from the mask surface;

e) a mask removal process for removing said mask from said workpiece after sequentially performing plural times said b) pattern material supply process for supplying said liquid-pattern material, c) drying process, and d) solid-material removal process; and

f) an annealing process for annealing the dried solute produced in the pattern forming openings.

23-64. (Cancelled)

65. (Currently Amended) The pattern forming method of claim 1, wherein said liquid pattern ~~material~~ solution is an organometallic compound solution. ~~a solution having a conductive solute dissolved in a solvent, and said solidifying of said liquid pattern material includes recovering said conductive solute from said solution.~~

66. (Currently Amended) The pattern forming method of claim 1, wherein said liquid pattern solution is a solution of a powder of an inorganic material dissolved in said solvent. ~~conductive solute is recovered from said solution by evaporating said solvent.~~

67. (Currently Amended) The pattern forming method of claim 1, said electrically conductive liquid pattern ~~material~~ solution is supplied to said pattern forming opening of said mask without submerging said workpiece in said electrically conductive liquid pattern ~~material~~ solution.

68. (Currently Amended) The pattern forming method of claim 1, wherein said electrically conductive liquid pattern ~~material~~ solution is selectively supplied to said pattern forming opening of said mask by use of a specific-volume discharge device.

69. (Previously presented) The pattern forming method of claim 68, wherein said specific-volume discharge device is a print head of an inkjet printer.